(S3.2) updating Θ with a value computed by $\Theta+\max\{\Delta_1, \Delta_2, \ldots, \Delta_{f[k]}\}$; and

(S3.3) finding the part of the schedule for ST_k by recomputing the robot waiting times with the updated cycle time Θ;

where:

EST_{k_q} or ST_{k_q} is the EST or the ST having the single-cluster tool C_i and a branch thereof, B_{i_q}.

3. The method of claim **1**, further comprising:

identifying, in the treelike hybrid K-cluster tool, ST_j with $j=\max_{l\in F}\{l\}$, and one or more ESTs of ST_j, the one or more ESTs being denoted as EST_{j-1}, EST_{j-2} down to EST_i such that an upstream adjacent tool of C_i is a fork tool;

determining a first part of the schedule for ST_j by performing the generating algorithm;

determining a second part of the schedule for EST_{j-1} based on the first part of the schedule;

repeating determining one part of the schedule EST_{j-m} based on a determined part of the schedule for EST_{j-m+1} until the one or more ESTs are scheduled.

4. The method of claim **2**, further comprising:

identifying, in the treelike hybrid K-cluster tool, ST_j with $j=\max_{l\in F}\{l\}$, and one or more ESTs of ST_j, the one or more ESTs being denoted as EST_{j-1}, EST_{j-2} down to EST_i such that an upstream adjacent tool of C_i is a fork tool;

determining a first part of the schedule for ST_j by performing the generating algorithm;

determining a second part of the schedule for EST_{j-1} based on the first part of the schedule; and

repeating determining one part of the schedule EST_{j-m} based on a determined part of the schedule for EST_{j-m+1} until the one or more ESTs are scheduled.

5. The method of claim **1**, wherein R_k is single-arm or double-arm.

6. The method of claim **2**, wherein R_k is single-arm or double-arm.

7. A treelike hybrid K-cluster tool having K single-cluster tools each having a robot for wafer handling, wherein the treelike hybrid K-cluster tool further comprises one or more processors configured to execute a process of generating a one-wafer cyclic schedule according to the method of claim **1**.

8. A treelike hybrid K-cluster tool having K single-cluster tools each having a robot for wafer handling, wherein the treelike hybrid K-cluster tool further comprises one or more processors configured to execute a process of generating a one-wafer cyclic schedule according to the method of claim **2**.

9. A treelike hybrid K-cluster tool having K single-cluster tools each having a robot for wafer handling, wherein the treelike hybrid K-cluster tool further comprises one or more processors configured to execute a process of generating a one-wafer cyclic schedule according to the method of claim **3**.

10. A treelike hybrid K-cluster tool having K single-cluster tools each having a robot for wafer handling, wherein the treelike hybrid K-cluster tool further comprises one or more processors configured to execute a process of generating a one-wafer cyclic schedule according to the method of claim **4**.

11. A treelike hybrid K-cluster tool having K single-cluster tools each having a robot for wafer handling, wherein the treelike hybrid K-cluster tool further comprises one or more processors configured to execute a process of generating a one-wafer cyclic schedule according to the method of claim **5**.

12. A treelike hybrid K-cluster tool having K single-cluster tools each having a robot for wafer handling, wherein the treelike hybrid K-cluster tool further comprises one or more processors configured to execute a process of generating a one-wafer cyclic schedule according to the method of claim **6**.

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